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PATENT Ifw

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(MBHB Case No. 02-1147-US)

In the Application of:

Karl Tryggvason

Serial No. 10/695,559

Filed: October 28, 2003

Title: Use of Antibodies to the Gamma 2 Chain of
Laminin 5 to Inhibit Tumor Growth and
Metastasis

Group Art Unit: To be assigned

Examiner: To be assigned

TRANSMITTAL LETTER

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In regard to the above-identified U.S. patent application;

1. We are transmitting herewith the attached:

- a) Transmittal Letter
- b) Information Disclosure Statement (IDS) (11 sheets);
- c) IDS Form 1449 (5 sheets);
- d) Copy of International Search Report of PCT/EP03/12012 (7 sheets);
- e) 87 cited References
- f) Return Receipt Postcard.

2. With respect to fees:

- a) No fee is required.
- b) Please charge any underpayment or credit any overpayment our Deposit Account, No. 13-2490.

3. CERTIFICATE OF MAILING BY "EXPRESS MAIL" UNDER 37 CFR § 1.10: The undersigned hereby certifies that this Transmittal Letter and the papers, as described hereinabove, are being deposited with the United States Postal Service with sufficient postage as "Express Mail Post Office to Addressee" in a box addressed to: PO Box 1450, Alexandria, VA 22313-1450, on this 30th day of June, 2004. Express Mail No. EV334706135US.

Respectfully submitted,


David S. Harper

Registration No. 42,636



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 02-1147-US)

In the Application of:	Tyggvason et al.)	
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	Laminin 5 to Inhibit Tumor Growth and)	
	Metastasis)	

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. Copies of the references cited below are enclosed. In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative relevance between references, whether cited in this or prior statements. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of a national application; within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or before the mailing date of a first Office Action on the merits. 37 C.F.R. § 1.97 (b)
- ☐ **after** three months of the filing date of a national application, or the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or **after** the mailing date of a first Office Action on the merits, but **before** the mailing date of a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), and includes (37 C.F.R. § 1.97 (c):
- ☐ the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below)

OR

- ☐ the fee of \$180 set forth in 37 C.F.R. § 1.17(p) (see "Fees" below).
- ☐ **after** a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), but before, or simultaneously with, the payment of the issue fee, and includes the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below), and the Petition Fee set forth in 37 C.F.R. § 1.17(i) (see "Fees" and "Method of Payment of Fees" below). Applicants hereby petitions for consideration of the Information Disclosure Statement submitted herewith and the accompanying references in examination of the subject patent application.

CERTIFICATION

- ☐ The **undersigned** hereby certifies that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

FEES

☒
☐

No fee is owed by the applicant(s).

The **IDS Fee of \$180.00** under 37 C.F.R. § 1.17(p) is enclosed herewith.

METHOD OF PAYMENT OF FEES

☐
☐

Attached is a check in the amount of \$180.00.

Charge Deposit Account No. 13-2490 in the amount of \$. (A duplicate copy of this communication is enclosed for that purpose.)

Please charge any underpayment or credit any overpayment in connection with this communication to Deposit Account No. 13-2490. A duplicate copy of this communication is enclosed for this purpose.

CERTIFICATE OF MAILING AS "EXPRESS MAIL" (37 CFR 1.10) I hereby certify that this correspondence and all attached paper(s) or fee(s) is being deposited with sufficient postage, with the United States Postal Service as EXPRESS MAIL POST OFFICE TO ADDRESSEE in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, with sufficient postage, on this 30th day of June, 2004 under Express Mail Certificate No. **EV334706135US**

Date: _____

6/30/04

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I. United States Patents

1. Strom, T.B. et al., U.S. Patent No. 5,152,980, Issued: Oct. 6, 1992.
2. Tryggvason, et al., U.S. Patent No. 5,660,982, Issued: Aug. 26, 1997.
3. Jones, et al., U.S. Patent No. 6,294,356, Issued: Sept. 25, 2001.
4. Tryggvason, et al., U.S. Patent No. 6,143,505, Issued: November 7, 2000.
5. Tryggvason, et al., U.S. Published Application No. 2002/0052307, Published on May 2, 2002.

II. Foreign Patent

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|------------------|------------------------------|
| 6. WO 00/26342 | Published: May 11, 2000 |
| 7. WO 00/34441 | Published: June 15, 2000 |
| 8. WO 01/87239 | Published: Nov. 22, 2001 |
| 9. WO 02/30465 | Published: April 18, 2002 |
| 10. WO 03/016907 | Published: February 27, 2003 |

III. Other documents

11. Aberdam, D. et al., (1994), Nature Genetics, "Herlitz's junctional epidermolysis bullosa is linked to mutations in the gene (LAMC2) for the $\gamma 2$ subunit of nicein/kalinin (Laminin-5)" 6(3):299-304
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IV. The Applicants hereby notify The Patent Office of the following co-pending applications:

	<u>Serial No.</u>	<u>Filing Date</u>	<u>Author</u>	<u>Attorney Docket No.</u>
1.	09/756,071	Jan. 8, 2001	Tryggvason et al.	02-1239-A

V. Discussion

In accordance with MPEP Sections 609 and 707.05(b), it is requested the documents cited be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with.

This is requested so that each document becomes listed on the face of the patent issuing on the present application.

Date: June 30, 2004

Respectfully Submitted,

By:



David Harper

Reg. No. 42,636

McDonnell, Boehnen

Hulbert & Berghoff

300 South Wacker Drive

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FORM PTO-1449
(Rev. 2-32)U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No.

Serial No.

02-1147-US

10/695,559

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant: Tyggvason et al.

Filing Date:
October 28, 2003Group:
To be Assigned

U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	5,152,980	10/6/92	Strom, T. B. et al.			5/18/89
	2.	5,660,982	8/26/97	Tryggvason, et al.			10/4/94
	3.	6,294,356	9/25/01	Jones, et al.			1/15/99
	4.	6,143,505	11/7/00	Tryggvason, et al.			2/18/97
	5.	2002/0052307	2/27/03	Tryggvason, et al.			1/8/01

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	6.	WO 00/26342	5/11/00	PCT			X	
	7.	WO 00/34441	6/15/00	PCT			X	
	8.	WO 01/87239	11/22/01	PCT			X	
	9.	WO 02/30465	4/18/02	PCT			X	
	10.	WO 03/016907	2/27/03	PCT				X

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

11.	Aberdam, D. et al., (1994), Nature Genetics, "Herlitz's junctional epidermolysis bullosa is linked to mutations in the gene (LAMC2) for the $\gamma 2$ subunit of nicein/kalinin (Laminin-5)" 6(3):299-304
12.	Buto, S. et al., (1998), EMBASE No. 97163048, "Production and characterization of monoclonal antibodies directed against the laminin receptor precursor."
13.	Giannelli, G. et al., (1997), Science, "Induction of cell migration by matrix metalloprotease-2 cleavage of laminin-5" 277:225-228.
14.	Hao, et al., (1996), Am. J. Pathol. "Differential Expression of laminin 5 ($\alpha 3\beta 3\gamma 2$) by human malignant and normal prostate" 149:1341-49.
15.	Hellman, K., et al., (2000), Int. J. Gynecol cancer, "Cancer of the Vagina: Laminin-5 $\gamma 2$ Chain Expression and Prognosis", Vol: 10, pp. 391-396.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

16.	Kallunki, et al., (1992), J. Cell Biol. "A truncated laminin chain homologous to the $\beta 2$ chain: structure, spatial expression, and chromosomal assignment" 119: 679-93.
17.	Larjava, et al., (1993), J. Clin. Invest. "Expression of integrins and basement membrane components by wound keratinocytes" 92:1425-35.
18.	Martin, et al., (1998), Mol. Med. "Down-regulation of laminin-5 in breast carcinoma cells" 4:602-13.
19.	Matsui, C. et al., (1995), J. Investigative Dermatology, " $\gamma 2$ chain of laminin-5 is recognized by monoclonal antibody GB3" 105(5):648-652.
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21.	Orian-Rousseau, et al., (1993), J. Cell. Sci. "Human colonic cancer cells synthesize and adhere to laminin-5. Their adhesion to laminin-5 involves multiple receptors among which is intergrin $\alpha 2 \beta 1$ " 111:1993-2004.
22.	Pelletier, et al., (1996), J. Biol. Chem. "Activation of the integrin $\alpha v \beta 3$ involves a discrete cation-binding site that regulates conformation" 271:1364.
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24.	Pikkarainen, T. et al., (1988), J. Biol. Chem. "Human laminin $\beta 2$ chain" 263:6751-6758.
25.	Pulkkinen, L. et al. (1994), Nature Genetics, "Mutations in the $\gamma 2$ chain gene (LAMC2) of kalinin/laminin 5 in the junctional forms of epidermolysis bullosa" 6(3):293-298.
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The Applicants hereby notify The Patent Office of the following co-pending applications:

Examiner Initial		Application Serial Number	Filing Date	Author	Attorney Docket No.	
	1.	09/756,071	Jan. 8, 2001	Tryggvason et al.	02-1239-A	

Harper/Biostratum/patents/02-1147-US

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